

**Woodward-Clyde**

4582 South Ulster Street  
Denver, Colorado 80231

**Fax Cover Sheet - Confidential**

**DATE:** December 2, 1996      **TIME:** 4:43 PM  
**TO:** Dolly Potter      **PHONE:** (307) 872-6571  
Solvay Mineral      **FAX:** (307) 872-6510  
**FROM:** David Gaige      **PHONE:** (303) 740-3872  
Air Program Manager      **FAX:** (303) 694-3946  
**RE:** Environmental Meeting December 5, 1996

**Number of pages including cover sheet:** 7

**Message**

Dolly

I have attached a draft of the overheads I plan to use at the meeting.

I will also provide a handout of basically the last three or so slides that identifies the information I will need to complete the BACT.

I talked to Lee to find out what TG had proposed for BACT. The numbers listed for BACT seem to be consistent with the TG discussion and Lee's perception of the current technology.

To satisfy EPA, and minimize questions, I think it will be best to identify a lower level of control to offer the comparison of alternatives, but propose the listed values as BACT.

Any comments?

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## Solvay Minerals

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### Best Available Control Technology Determination

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## Major Source Determination

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- **Significant Emission Increase**

<u>Pollutant</u>	<u>TPY</u>
Carbon Monoxide	100
Nitrogen Oxides	40
Sulfur Dioxide	40
Particulate Matter	25
PM <sub>10</sub>	15
Volatile Organic Compounds	40

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## **Best Available Control Technology**

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Federal - Emission limitation based on maximum degree of reduction for each pollutant...taking into account energy, environmental, and economic impacts. ("Top Down" process)

Wyoming - Utilize best available control technology with consideration of the technical practicability and economic reasonableness of reduction or elimination of the emissions resulting from the facility.

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## **Federal Top Down Process**

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- Applies to each new (or increased) emission source.
  - » Identify maximum level of control available
  - » compare cost versus pollutant control - \$/ton and Incremental \$/ton comparison
  - » If unreasonable, repeat with next lower level of pollutant control
  - » Short-cut available for smaller sources where one technology is clearly superior

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## Available Control technology

- Technology
  - » Technically feasible
  - » Commercially available
- Emission Rate
  - » Demonstrated on similar processes
  - » Economically achievable

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## Particulate Controls

Process	Emission Rate	
	<u>lb/ton</u>	<u>gr/dscf</u>
● Gas Fired Dryer	0.03	0.01
● Gas Fired Calciner	0.06	0.014
		<u>gr/acf</u>
● Material Handling	-	0.01

*crusher - emissions?*

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*100,000 dscfm  
22.3 PPH*

*10 pph x 7,000 = grn/hr.*

*1167 grn/min*

*CA-3 54,000 dscf/m  
BH 0.01 gr/dscf  
ESP = 5 sec. H<sub>2</sub>O*

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## **Particulate Test**

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- Wyoming requires method 202 - EPA particulate train with methylene chloride impingers followed by water impingers.

Particulate measurement based on the filter catch plus the inorganic (water) portion of impingers.

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## **State BACT Process**

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- Applies to NOx from the Dryer and Calciner

Identify available options. If not selecting the greatest level of control, compare costs, etc.

– Current demonstrated, and lowest proposed, emission rate is 0.05 lb/mmbtu

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## **BACT Summary**

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**Calciner**

≡ NOx - 0.05 lb/mmbtu

≡ PM<sub>10</sub> - 0.06 lb/ton

**Dryer**

≡ NOx - 0.05 lb/mmbtu

≡ PM<sub>10</sub> - 0.01 gr/dscf

**Miscellaneous**

≡ PM<sub>10</sub> - 0.01 gr/acf

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## **BACT Information Required**

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- For each particulate emission point
  - » alternative controls considered (emission rate and control technology)
  - » alternatives not technically feasible
    - include reasoning
  - » alternatives not economically feasible
    - include capital and operating cost evaluation/comparison.
  - » alternative selected

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## **BACT Information Required**

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- For each source of NOx
- alternatives considered
- alternatives selected.
- justification if other than low NOx burners.
- do not need to consider catalysts etc.

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## **BACT Information Required**

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- VOC sources:
- Identify if you are aware of any demonstrated control technology.

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# FAX

## Solvay Minerals Inc. ENVIRONMENTAL DEPARTMENT

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Date November 25, 1996  
Number of pages including cover sheet 1

To: David Gaige  
Woodward-Clyde  
tel: (303) 740-3872  
fax: (303) 694-3946

From: Dolly Potter  
Phone 307-872-6571  
Fax Phone 307-872-6510

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David,

I'm flying Rock Springs to Denver on Wednesday, December 4. I arrive at 7:55 am on United Flight #7707. We found a flight from Denver to Salt Lake to Oakland on Delta Airlines. Leave Denver at 8:50 am on #1227, then leave Salt Lake to Oakland at 11:20 on #585. Arrives Oakland at 12:10 pm. Returning Oakland to SLC on Delta Flight #442 at 10:40 Friday, December 6. Arrive SLC at 1:11 pm. I will then ride home with other Solvay employees, so I don't know the SLC to Denver connection from there.

I am on a waiting list for the Mariott in San Ramon. If I don't get in there, I'll stay at the Residence Inn.

Let me know if you will be on the same flight, if so, I will catch a ride from Oakland to San Ramon with you.

We will need to discuss all requirements for the air quality permit application on Thursday. If you want, we can split it up.

Talk to you soon.

*Dolly A. Potter*

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**Woodward-Clyde****FAX TRANSMITTAL**4582 South Ulster Street  
Denver, Colorado 80237

Return FAX Number is (303) 694-3946

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**For Immediate Delivery****TO:** DOLLY PETER**Company:** Solvay**Phone Number:** 872 - 1571**FAX Number:** 307 872 - 1510**FROM:** David Gans**Total Pages (including Cover Sheet):** 3**Date:** Nov 25, 1996**Phone Number:** 303 740 - 3872**Message:**

HERE ARE THE TWO CHANGES THAT  
TOM REILLY HAD MARKED, BUT INCORRECT IN  
THE COPY YOU FORWARDED THIS AM.

OTHERWISE TOM GAVE HIS BLESSING.

I HAVE MADE THE SAME TRAVEL ARRANGEMENTS  
FOR NEXT WEEK. SO I WILL MEET YOU  
AT DIA ON DEC 4. AM

If you do not receive all of the pages transmitted or have any problems, call (303) 694-2770.

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arising out of, or in connection with, or resulting from, this Agreement and/or the Work, whether or not such damages arise out of or are in connection with or result from the negligence of either or both parties.

#### 7. Liens.

Contractor hereby waives its right to place liens on the Company's property and shall promptly discharge its obligations to its laborers, materialmen and creditors so as to prevent placement of liens on the Company's property.

#### 8. Indemnity.

To the fullest extent permitted by law, Contractor agrees to protect, defend, indemnify, save and hold the Company, and any affiliate of the Company and their respective partners, officers, directors, employees, agents and representatives, ~~consultants and their invitees~~, free and harmless from and against any and all losses, claims, liens, demands, liabilities and causes of action of every kind and character, including the amounts of judgments, penalties and interest, incurred by the Company in defense of same (including without limitation any and all court costs, reasonable attorneys' fees, reasonable investigation costs and expenses, witness costs and/or expenses), ~~without limit, for the extent~~ arising in conjunction with the equipment, materials, supplies and/or services or Work to be supplied or performed by Contractor or any employee or subcontractor thereof; the Contractor's performance or breach of this Agreement; or negligence or misconduct by Contractor or any employee or subcontractor thereof.

#### 9. Insurance.

Contractor shall, during the term of this Agreement, carry, at its own expense with reliable insurance companies, (1) Statutory Worker's Compensation coverage and; (2) Comprehensive General and Automobile Liability insurance coverage in the sum of \$1,000,000.00.. All policies providing coverage hereunder shall contain provisions that (i) no cancellation or material changes in the policies shall become effective except on thirty days' advance written notice thereof to the Company, and (ii) the workers Compensation insurance shall have no right of recovery or subrogation against the Company, its divisions, affiliates, or subsidiary companies, it being the intention of the parties that such insurance shall protect all parties, and the Contractor's carrier shall be liable for any and all losses covered by the above-described insurance. Contractor shall secure and deliver to the Company, prior to Contractor's execution of this Agreement, certificates evidencing that insurance coverages of the types and limits required by the Company are in full force and effect.

#### 10. Confidentiality.

A. All information received, developed and/or obtained by Contractor, Contractor's employees, subcontractors, agents and consultants arising out of or related to the performance of the Work and the Company's operations and business activities, including, without limitation, plant design and equipment, processes, drawings, plans, inventions (whether patentable or not), trade secrets, specifications, analyses, reports and technical information (collectively, "Confidential Information") shall be or become the property of the Company and shall be treated as confidential. Only those individuals who have a "need-to-know" shall be apprised of Confidential Information. Confidential Information shall not be used directly or indirectly by any individual receiving Confidential Information other than in the performance of Work and it shall not be disclosed to any third party without the prior written consent of the Company. Confidential Information shall not include information that is or becomes available to the general public through no fault of Contractor, Contractor's employees, subcontractors, agents or consultants, *or that may be required to be disclosed by law.*

B. Contractor shall keep complete written records of all Work performed hereunder and promptly disclose to the Company all new developments (which shall include without limitation all ideas, inventions, discoveries and improvements whether patentable or not and whether or not reduced to practice) arising from this Agreement by Contractor, its employees, subcontractors or agents in the performance of Work. Contractor hereby irrevocably assigns to the Company all right, title and interest (including, without limitation, patent rights) to and in said new developments arising from this agreement and agrees on a reimbursable cost basis (i) to execute all appropriate instruments (including, without limitation, assignments and patent applications), (ii) to give appropriate testimony, and (iii) to give whatever other reasonable assistance the Company may request in order to obtain, protect and enforce the Company's rights to said new developments. The Company also shall have the right to, and shall own, all copyrightable plans which are created or developed by Contractor or any of its employees, subcontractors or agents as a result of, or arising out of, performance of the Work and services.

C. Contractor shall obtain from each of its employees, subcontractors and agents performing Work, written covenants binding them to the confidentiality provisions of this Agreement.

#### 11. Subcontracts and Assignment.

This Agreement shall be binding upon and inure to the benefit of the respective successors, executors, administrators and assigns of the parties. Contractor shall not subcontract or assign any of Contractor's rights, duties, or obligations hereunder, or any